M/047/0090
cc: Leslie

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July 31, 2009

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AUG 05 2009
DIV. OF OIL, GAS & MINING

STATE OF UTAH
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For the attention of: Mr. Paul Baker, Minerals Program Manager

REFERENCE: **Western Resource Advocates' Comments and Objections Regarding Tentative Approval to Commence Large Mining Operations, Earth Energy Resources, PR Spring Mine, M/047/0090, Uintah County, Utah**

Dear Mr. Baker:

Thank you for forwarding a copy of the letter from Western Resource Advocates (WRA) received on July 6, 2009 by the Division of Oil, Gas and Mining (DOGM). WRA raised several objections to our Notice of Intent (NOI); however, the circumstances underlying these objections are addressed within the NOI and supporting documentation contained therein. Each of the comments or objections raised by Western Resource Advocates will be addressed below and my responses will be organized in a similar manner to its letter to assist in matching responses to the objections raised.

Air Quality Data and Analysis

Earth Energy Resources has worked with the Environmental Protection Agency (EPA), Region 8 since early 2008 to provide data and analysis and ascertain permitting requirements for our planned mining operations. EPA's response to our submittals will be included in Appendix B (as required by the tentative approval granted by DOGM) when it is received and Earth Energy will comply with any conditions that are set forth by EPA. Any public review of documentation associated with our air permitting activities should be coordinated with EPA, Region 8.

The May 20, 2009 letter granting tentative approval to commence large mining operations stipulates that the documentation from the EPA is required in Appendix B prior to issuing final approval. WRA has attempted to expand this requirement to include an air quality permit (which

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may not be required) as well as documentation from Earth Energy on how it intends to comply with any conditions set by EPA. The proper forum for public review of air permitting activities is at the EPA, not DOGM.

WRA notes that National Ambient Air Quality Standards for $PM_{2.5}$ and ozone are of concern, especially in high elevation valleys. The location of the project area in PR Spring is on the upper plateau, not in the valleys, which should alleviate air quality concerns.

Soil Erosion and Stormwater Runoff

WRA states that the PR Spring Mine project promises to result in significant soil erosion and stormwater runoff. The NOI goes into extensive detail to illustrate how stormwater runoff and erosion will be prevented. The mine pits and processing site are self contained disturbances located at the top of a plateau. Virtually no run-on is expected at these areas and containment and storage sumps are constructed around the mine pits and processing areas to prevent run-off from these locations. In addition, the SWPPP includes requirements to inspect sediment control devices weekly (page 13, paragraph 1) and to visually monitor runoff from the toes of the overburden/interburden storage areas on a quarterly basis whenever runoff occurs. Further, Earth Energy is committed to addressing any non-compliance that occurs with respect to the general storm water permit, as detailed on pages 18 and 19 of the SWPPP as well as on the Site Compliance Evaluation included in Appendix E of the SWPPP. Our project falls under the coverage of the General Multi-Sector Permit for Storm Water Discharges Associated With Industrial Activity (No. UTR000000) (SWPPP page 1).

Details on the construction of the overburden/interburden storage areas are contained both within the NOI (page 20, paragraphs 1 and 3; page 37, paragraph 1; page 49, paragraph 1) and SWPPP (page 5, paragraph 4). Analytical testing was performed at an independent third party laboratory and reviewed by the Utah Division of Water Quality to ensure there would be no impact to surface or groundwater as a result of metals, salts, or hydrocarbons contained within the processed sand and fines.

WRA enumerates several activities that may alter natural drainages by diverting and concentrating natural runoff. Once again, the design of the project minimizes the potential for this to occur and the SWPPP details the actions required if non-compliance is discovered. The processing site and mine pit are self contained areas, so no runoff will occur from these areas. The overburden/interburden storage areas will be constructed with a gentle grade away from the outslope to minimize runoff and erosion (page 37, paragraph 1). In addition, the location of the project area virtually eliminates the potential for stormwater run-on, as discussed extensively within the NOI.

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The topsoil storage areas are designed with berms to minimize water run-on or runoff and will be planted with fast growing cover grass for protection (page 27, paragraph 2; figure 2d). All roads have been constructed within existing containment features or with their own containment measures to control drainage and erosion (figure 2f; page 48, paragraph 4; SWPPP page 15, paragraph 6).

WRA states that 4.9 million cubic yards or excess material will be stored in areas that fall outside of containment measures. As noted above, both the NOI and SWPPP contain detailed information on the construction of the overburden/interburden storage areas and the measures taken to prevent siltation from these areas. In addition, through the monitoring programs contained within the SWPPP, any non-compliance with the SWPPP requires specific actions to address and correct the non-compliance. Coarse materials with little siltation potential will be placed in the steepest sections of the storage areas and containment cells will be constructed for produced sand tailings on the flatter areas to minimize erosion of these materials (page 20, paragraph 3).

Although, as we have demonstrated, this project would not result in sedimentation of Main Canyon, much less further downstream into Willow Creek, it is also important to note that WRA's assertions regarding sediment loads resulting in increased total dissolved solids concentrations is incorrect. Even in the very highly unlikely circumstance that our project resulted in sediments reaching Willow Creek, these sediments would arrive in the form of suspended particulates, and not ions dissolved within the water column. Total dissolved solids (or salinity) is the parameter for which Willow Creek has been placed on the State's 303(d) list, and there is no inherent relationship between increased sediments and increased dissolved load.

Reclamation measures for the project area are deliberately designed to minimize erosion and transport of topsoil into Main Canyon. Surfaces will be roughened to provide sites amenable to revegetation and minimize runoff and erosion (page 53, paragraph 2). The overburden/interburden storage areas are designed not to extend all the way into Main Canyon, leaving a zone of mature vegetation on the lower portions of the ephemeral washes.

As noted previously in this letter, Earth Energy is required to continuously monitor runoff from the overburden/interburden storage areas and is required to take action if its inspections reveal a non-compliance with the SWPPP.

I am confident that DOGM is cooperating with the Division of Water Quality and other State and Federal agencies to ensure that all required operating practices are met by Earth Energy. Details of the General Multi-Sector Permit for Storm Water Discharges Associated With Industrial Activity and monitoring programs and record keeping are detailed within the SWPPP. Earth Energy will submit the required NOI form to the Division of Water Quality prior to developing the project; submittal of the NOI indicates to the State that we are considered covered by the General

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Permit, that we have an SWPPP in place, and that we will follow all requirements of the Permit and the SWPPP.

In the course of obtaining permit-by-rule status for groundwater discharge, Earth Energy submitted detailed information on the identity and chemical/physical properties of the process chemical to the Utah Division of Water Quality (DWQ). In the letter to DWQ requesting permit-by-rule designation, effects of operations on both groundwater and surface water were considered when requesting that designation.

The design of drainage and containment structures to meet a 10-year, 6-hour precipitation event is based on guidelines developed for the coal program. Free board ditch depth of approximately 2 feet (page 16, paragraph 2; page 36, paragraph 2) will greatly exceed the capacity required for a 10-year event and will likely meet or exceed the standards for a 25 or 100 year event.

Reclamation Efforts

Methods to minimize and prevent erosion of topsoil are discussed previously in this letter. The reclamation plan, as described in the NOI Section 110.5 states that slopes will be left in a roughened condition to maximize infiltration and minimize run-off. As noted in the NOI and the tentative approval to commence large mining operations, a reclamation contract and surety must be established prior to operations and the bond will not be released until Earth Energy has demonstrated that vegetation has survived three growing seasons and has achieved 70 percent of the pre-mining cover (page 60, paragraph 3).

Pit Compaction/Subsidence

Earth Energy is committed to restoring disturbed areas to blend in with the surrounding terrain. The depleted pit areas represent the best location for replacement of processed sand and fines and Earth Energy can modify its reclamation efforts to ensure that no excessive pit compaction or subsidence occurs. Since this project allows for concurrent reclamation as mining progresses, initial reclaimed areas will provide valuable data on any subsidence that occurs following the initial backfill. Regardless, very little subsidence is anticipated as the backfilled material is principally of a granular nature with negligible water content.

Conclusion

Our review of the concerns and objections raised by Western Resource Advocates did not indicate any deficiencies in the design and operation of the project at PR Spring. The objections raised by WRA are addressed within the NOI and supporting documentation and there are no reasonable grounds by which final approval to commence large mining operations should be delayed.

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Should you wish to discuss WRA's letter or my response in more detail, please contact me at your convenience.

Yours truly,
Earth Energy Resources, Inc.

Barclay Cuthbert
Vice President

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